PROPOSED

PERMIT APPLICATION REVIEW
TEMPORARY COVERED SOURCE PERMIT NO. 0769-01-CT
Application for Significant Modification Review No. 0769-03

Company: Hawaiian Dredging Construction Company (HDCC)

Mailing Address: 91-063 Malakole Street
Kapolei, Oahu, HI 96707

Facility: Crushing and Screening Plants

Location: Various Temporary Sites, State of Hawaii

Initial Location: TMK (2) 2-8-079:013, Maui Business Park
Kahului, Maui

SIC Code: 1429 (Crushed and Broken Stone, Not Elsewhere Classified)

Responsible Official: Mr. David Gomez
Manager, Equipment Division
(808) 673-4323

Contact: Mr. Fred Peyer
Environmental Management Consultant
95-109 Waikalani Drive
Mililani, Hawaii 96789
(808) 779-2948

Equipment:

1. 400 TPH TEREX/Pegson portable jaw crushing plant (existing self-propelled), model no. XA400S, serial no. PIDXA40SEOMC55100 (manufactured 2011), with:

    a. 13'5" x 3'4" feed hopper;
    b. Various conveyors;
    c. Built-in water spray system; and
    d. exempt 315 HP Scania diesel engine, model no. DC-09 70 A, serial no. To be provided (manufactured 2011) with Tier 4i SCR (selective catalytic reduction) NOx control unit.

2. 551 TPH Powerscreen screen (removed from permit), model no. Chieftain 2100, serial no. PID00124CDGB22277, with:

    a. exempt 111.3 HP Caterpillar diesel engine, model no. C-4.4 ATAAC, serial no. 44605571; and
    b. water sprays and material wetting to be used as dust control.

Due to the size and manufacture date of the crusher, the crusher is subject to 40 CFR Part 60, Subpart OOO - Standards of Performance for Nonmetallic Mineral Processing Plants.

BACKGROUND

Hawaiian Dredging Construction Company has submitted a modification application to remove the permitted 551 TPH rock screen from their 400 mobile crushing plant. The rock screen under modification application no. 0769-02 was never added to the existing 400 TPH mobile crushing plant. The mobile rock screen is currently permitted under Pineridge Farms 0763-01-NT. This modification requires significant permit conditions changes.

The existing 400 TPH Powerscreen mobile jaw crusher is powered by a 315 HP Caterpillar Tier 4i diesel engine. The crusher is track mounted and self-propelled. . The engine will not be subject to the permit since it propels the crusher and is exempt pursuant to HAR §11-60.1-82(d)(4), which exempts internal combustion engines propelling mobile sources.

The mobile jaw crusher is subject to NSPS Subpart OOO. There will be no operating limitations for the proposed crushing plant. Water sprays and a water truck will be used to control fugitive emissions.

Process

Raw material is dropped into the feed hopper by a loader and passed to the jaw crusher. The crushed material drops onto a moving conveyor belt and is transported to the stockpile. The product material is conveyed to one stockpile.

APPLICABLE REQUIREMENTS

Hawaii Administrative Rules (HAR)

Title 11 Chapter 59, Ambient Air Quality Standards

Title 11 Chapter 60.1, Air Pollution Control

- Subchapter 1, General Requirements
- Subchapter 2, General Prohibitions
  - 11-60.1-31, Applicability
  - 11-60.1-32, Visible Emissions
  - 11-60.1-33, Fugitive Dust
- Subchapter 5, Covered Sources
- Subchapter 6, Fees for Covered Sources, Noncovered Sources, and Agricultural Burning
  - 11-60.1-111, Definitions
  - 11-60.1-112, General Fee Provisions for Covered sources
  - 11-60.1-113, Application Fees for Covered sources
  - 11-60.1-114, Annual Fees for Covered sources
  - 11-60.1-115, Basis of Annual Fees for Covered Sources
- Subchapter 8, Standards of Performance for Stationary Sources
  - 11-60.1-161, New Source Performance Standards
- Subchapter 9, Hazardous Air Pollutant Sources
- Subchapter 10, Field Citations

Standard of Performance few Stationary Sources (NSPS), 40 CFR Part 60
Subpart OOO – Standards of Performance for Nonmetallic Mineral Processing Plants is applicable to the crushing plant (manufactured in 2011) because the maximum capacity of the facility is greater than 150 tons/hour, and the crushing plant was manufactured after August 31, 1983.

Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines is not applicable to the existing exempt 351 HP diesel engine because the engine is considered a nonroad engine as defined in 40 CFR §1068.30. Subpart IIII applies to stationary internal combustion engines that are not mobile/nonroad engines.

National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR Part 61
This source is not subject to NESHAP as there are no standards in 40 CFR Part 61 applicable to this facility.

National Emission Standards for Hazardous Air Pollutants for Source Categories (NESHAP) (Maximum Achievable Control Technology (MACT)), 40 CFR Part 63
Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE) is not applicable to the existing exempt 315 HP diesel engine because the engine is considered a nonroad engine as defined in 40 CFR §1068.30. Subpart ZZZZ applies to stationary internal combustion engines that are not mobile/nonroad engines.

Prevention of Significant Deterioration (PSD), 40 CFR Part 52, §52.21
This source is not subject to PSD requirements because it is not a major stationary source as defined in 40 CFR §52.21 and HAR Title 11, Chapter 60.1, Subchapter 7.

Compliance Assurance Monitoring (CAM), 40 CFR 64
This source is not subject to CAM because the facility is not a major source. The purpose of CAM is to provide a reasonable assurance that compliance is being achieved with large emissions units that rely on air pollution control device equipment to meet an emissions limit or standard. Pursuant to 40 Code of Federal Regulations, Part 64, for CAM to be applicable, the emissions unit must: (1) be located at a major source; (2) be subject to an emissions limit or standard; (3) use a control device to achieve compliance; (4) have potential pre-control emissions that are 100% of the major source level; and (5) not otherwise be exempt from CAM.

Air Emissions Reporting Requirements (AERR), 40 CFR Part 51, Subpart A
AERR is not applicable because emissions from the facility do not exceed AERR triggering levels (100 TPY for PM).

DOH In-house Annual Emissions Reporting
The Clean Air Branch requests annual emissions reporting from those facilities that have facility wide emissions exceeding in-house reporting levels and for all covered sources. Annual emissions reporting will be required because this facility is a covered source.

Best Available Control Technology (BACT)
This source is not subject to BACT analysis because emission increases resulting from the proposed modification do not exceed significant levels (Crushing Plant utilizes built-in wet spray system which would be BACT). BACT analysis is required for new sources or modifications to sources that have the potential to emit or increase emissions above significant levels considering any limitations as defined in HAR, §11-60.1-1.

The table below shows the net emissions from the proposed modification does not trigger BACT significant levels.

Table 1 - Emissions Rates, BACT

Pollutant	Existing Plant[1] Emissions (TPY)	Proposed[2] Emissions (TPY)	Change in Emissions (TPY)	BACT Trigger (TPY)	DOH Levels (TPY)
PM	3.30	4.29	1.27	25	25
PM_{10}	1.32	1.88	0.70	15	25
$PM_{2.5}$	0.18	0.36	0.22	10	-----

1. Emissions: existing plant (crusher, screen, stockpiles) 2500 Hrs/yr
2. Emissions: proposed modified plant (crusher, screen removed, stockpiles) 8760 Hrs/yr
3. Mobile crusher diesel engine is exempt and not included in the calculations.

Synthetic Minor Source
A synthetic minor source is a facility that is potentially major, as defined in HAR, §11-60.1-1, but is made non-major through federally enforceable permit conditions. This facility is not a synthetic minor source because potential emissions do not exceed major source thresholds when the facility is operated without limitations for 8,760 hours/year.

INSIGNIFICANT ACTIVITIES / EXEMPTIONS

The existing mobile primary crusher, TEREX/Pegson (tracked), is self-propelled by the integrated diesel engine. The engine propels the crusher and is exempt pursuant to HAR §11-60.1-82(d)(4), which exempts internal combustion engines propelling mobile sources.

Fuel Tank
Diesel fuel tank

ALTERNATIVE OPERATING SCENARIOS

Diesel Engine
None proposed.

AIR POLLUTION CONTROLS

The crushing plant is equipped with a built-in water misting spay system to control fugitive dust. Water trucks/water sprays will be used as necessary to minimize fugitive dust from plant operations, material transfer points, stockpiles, and plant roads.

PROJECT EMISSIONS

Emissions from the mobile stone processing plant were estimated using AP-42 and manufacturer emission factors. PM_{10} emissions from the crushing operations were estimated using AP-42 section 11.19.2, revised 8/04. Table 2 below lists the maximum emissions from the existing mobile stone processing plant (crusher and screen) with the removal of the screen for the proposed modification.

Table 2 - Emissions for the modified Mobile Stone Processing Plant

Pollutant[1]	Modified Facility[2] Emissions 8,760 hrs (TPY)	Stockpiles Emissions 8,760 (TPY)	Total Emissions[1] 8,760 hrs (TPY)	Road Emissions 8,760 (TPY)
PM	2.96	1.33	4.29	37.21
PM_{10}	1.25	0.63	1.88	9.10
$PM_{2.5}$	0.26	0.10	0.36	0.91

1. Total Emissions include equipment and storage piles
2. Modified facility consists of 400 TPH Mobile Jaw Crusher with 551 TPH Mobile Screen removed with 8,760 hrs/yr unlimited operation.
3. Mobile crusher diesel engine is exempt and not included in the calculations.

Greenhouse Gas Tailoring Rule

There are no GHG emissions because emissions from the crushing plant are only fugitive emissions.

AIR QUALITY ASSESSMENT

An ambient air quality assessment is not required for this modification because the modified mobile crushing plant emissions are fugitive in nature. The modification consist of removal of the mobile screen and increasing permitted operation from 2,500 hr/yr to 8,760 hr/yr. The existing diesel engine on the mobile crusher is exempt as it is self-propelled (tracked).

SIGNIFICANT PERMIT CONDITIONS

1. The existing facility equipment will consist of the 400 TPH mobile (self-propelled) crushing plant only with the removal of the 551 TPH mobile screen.

2. The operational limit of 2,500 hours per year will be removed allowing unlimited operations at 8,760 hours per year. An hour meter on the mobile crusher diesel engine will no longer be required.

3. The permittee shall not cause to be discharged into the atmosphere from the existing crusher, fugitive emissions which exhibit greater than twelve (12) percent opacity (construction after April 22, 2008).

4. The permittee shall not cause to be discharged into the atmosphere from any transfer point on the belt conveyors, screening operation, or from any other affected facility, fugitive emissions which exhibit greater than seven (7) percent opacity.

CONCLUSION

HDCC is proposing to reduce (modify) their inventory of equipment covered under this permit with the removal of the mobile screen. The revised emission estimates at unlimited operations (8,760 hrs/yr) predicts that the facility will remain a non-major source. Air pollution controls at the facility consist of installing, operating, and maintaining waterspray systems and water trucks.

Issuance of a Modified Temporary Covered Source Permit is recommended based on the information provided by the applicant and the conservative nature of the calculations. Recommend issuance of the covered source permit subject to the incorporation of the significant permit conditions, thirty-day (30-day) public comment period, and a forty-five-day (45-day) Environmental Protection Agency review period.

Gary Siu
August 2015